

# DOCKETED

IN THE UNITED STATES DISTRICT COURT FOR THE  
SOUTHERN DISTRICT OF NEW YORK

MIDWAY MANUFACTURING COMPANY:

Deposition of

vs.

FILED

Theodore Mairson

THE MAGNAVOX COMPANY

OCT - 8 1976

and

SANDERS ASSOCIATES, INC.

H. J. JEFFERSON, CLERK  
UNITED STATES DISTRICT COURT

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IN THE UNITED STATES DISTRICT COURT FOR THE  
NORTHERN DISTRICT OF ILLINOIS, EASTERN DIVISION

THE MAGNAVOX COMPANY, et al :

Consolidated Actions

vs.

:

74 C 1030 ✓

74 C 2510 ✓

BALLY MANUFACTURING  
CORPORATION, et al

:

75 C 3153

75 C 3933

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Deposition taken pursuant to

subpoena and notice at the Sanders Associates, Inc.,  
Headquarters, Spit Brook Road, Nashua, New Hampshire;  
Monday, April 26, 1976; commencing at four o'clock in the  
afternoon.

ERNEST W. NOLIN & ASSOCIATES

*General Stenographic Reporters*

369 ELGIN AVE., MANCHESTER, N. H. 03104

TELEPHONE: 623-6906

ORIGINAL

PRESENT:

For Midway Manufacturing Company,  
Bally Manufacturing Corporation  
and Empire:

Donald L. Welsh, Esq., 135 South  
LaSalle Street, Chicago, Illinois

For Atari, Inc.:

Flehr, Hohbach, Test, Albritton  
& Herbert, by Edward S. Wright,  
Esq., 160 Sansome Street, 15th  
Floor, San Francisco, California.

For Sanders Associates, Inc.,  
and Magnavox Company:

Theodore W. Anderson, Esq.,  
77 West Washington Street,  
Chicago, Illinois.

For Sanders Associates:

Louis Ettlinger, Esq., and  
Richard I. Seligman, Esq.,  
Daniel Webster Highway, South,  
Nashua, New Hampshire.

Stenotype Reporter:

Ronald J. Hayward

THEODORE MAIRSON

called as a witness, being first duly sworn, was examined  
and testified as follows:

(Interrogatories by Mr. Welsh.)

Q. Would you state your full name for the record, please?

A. Theodore Mairson.

Q. That is M-a-i-r-s-o-n?

A. Correct.

Q. Where do you live, Mr. Mairson?

A. 29 Lawrence Lane, Lexington, Mass.

Q. Have you had a formal education after high school?

A. Yes.

Q. What was that?

A. Bachelor of Science in Chemical Engineering, Washington University, St. Louis, 1939. I did graduate work in physics and applied mathematics, but did not take a further degree. This was also at Washington University.

Q. Are you employed, Mr. Mairson?

A. Yes, I am employed.

Q. At Sanders Associates?

A. Correct.

Q. What is your position at Sanders?

A. I am supervisor of special projects in the corporate computer sciences division.

Q. That is located here in South Nashua?

A. Yes, correct.

Q. How long have you held that position?

A. For about four years.

11 Q. And what are your duties in that position?

A. I do various kinds of advanced theoretical analysis related to engineering projects in the company and that often requires considerable amounts of computation.

12 Q. Do you use computers in that work?

A. Yes.

13 Q. And what computers do you use?

MR. ANDERSON: I object, fix it in time. Do you mean at the present time?

MR. WELSH: Yes, during this four-year period when he has had this position.

THE WITNESS: The PDP-10.

14 Q. That is a Digital Equipment Corporation computer?

A. Correct.

15 Q. Any others?

A. At the present time, no.

16 Q. Within that past four-year period.

A. No.

17 Q. What position did you hold at Sanders prior to your present position?

A. I was manager of corporate analysis and computation



in the computer sciences division.

18 Q. How long did you hold that position?

A. Two years.

19 Q. What were your duties in that position?

A. I was responsible for the operations of four sections in that department. These were made up of various classes of professional people including engineers, physicists, mathematicians and programmers.

20 Q. In that work, did you use computers?

A. Personally?

21 Q. Yes.

A. No.

22 Q. Did the persons who worked for you use computers?

A. Yes.

23 Q. What computers do they use?

A. Their activities would include a large number of computers, the PDP-10, the IBM 360 and 370 and various minicomputers.

24 Q. Including the PDP-11?

MR. ANDERSON: I object, you are leading the witness.

A. THE WITNESS: I don't think

there was a PDP-11 at that time.

25 Q. Prior to that time, what position did you hold  
at Sanders?

A. I was manager of analysis, reporting to a  
vice-president from planning.

26 Q. Who was that?

A. Martin Richmond.

27 Q. Over what period of time?

A. I reported to Richmond for a period of about  
ten years, I do not recall exactly when those  
titles came into existence.

28 Q. Have you reported to him for the last ten years?

A. No, you were leading me back in time. That was  
a period roughly from 1960 to 1970.

29 Q. How long have you been employed at Sanders?

A. It will be nineteen years in July.

30 Q. Where is your office located in your present  
position?

A. It is on the ground floor of the north wing of  
the South Nashua buildings.

31 Q. Your previous position as manager of corporate  
analysis and computation, where was your office?

A. Ground floor, north wing, South Nashua buildings.

- 32 Q. Same place?
- A. Yes.
- 33 Q. Prior to - strike that. When did you first occupy an office on the ground floor at the north wing of the south Nashua facility of Sanders?
- A. Approximately in the spring of 1970.
- 34 Q. About the time - was that about the time you assumed the position of manager of corporate analysis and computation?
- A. Yes.
- 35 Q. Where were you located prior to that time at Sanders?
- A. In the Bedford facility.
- 36 Q. How long were you at the Bedford facility prior to coming to south Nashua?
- A. I don't recall just when the Bedford facility opened, but I moved into it when it did and I would place that roughly at 1963-64.
- 37 Q. Did your work as manager of analysis, reporting to Mr. Richmond, involve the use of computers?
- A. Yes.
- 38 Q. What computers?
- A. The PDP-10, the PDP-1, a time-sharing service called

Telcomp that we got by subscription from Bolt,  
Beranek & Newman. Small analog computers. You  
mean in that question that involved me personally?

39 Q. Either you personally or people working under  
you.

A. All right, then add various large IBM machines  
such as the 360, 7090, 7094.

40 Q. Were the ones that you mentioned previously; that is,  
the PDP-10, PDP-1, the small analog computers and  
the time-sharing of Telcomp all used by you  
personally?

A. Yes.

41 Q. Was the PDP-1 you referred to also a computer of  
Digital Equipment Corporation?

A. Yes.

42 Q. Was there only one such computer on which you  
worked?

MR. ANDERSON: I object to  
the term "such computer." Do you mean there was  
only one PDP-1?

MR. WELSH: Yes, upon which  
he worked.

THE WITNESS: There was a

PDP-1 at the facility in Bedford that we used. Prior to that time, there was a PDP-1 at Bolt, Beranek & Newman in Cambridge that we would rent on occasion.

43 Q. Were you working at the Bedford facility when the PDP-1 was acquired there?

A. Yes.

44 Q. When was that?

A. I'd place that at late 1967 or early 1968.

45 Q. From whom was that acquired, if you know?

A. It was bought from Bolt, Beranek & Newman.

46 Q. Is that the same one on which you had rented time previously at B, B & N?

A. No. At least I don't think it was. The machine we bought came from a B, B & N facility in California.

47 Q. Now, did you have anything to do with acquiring - with Sanders' acquiring a PDP-1 for Bedford?

A. I did.

48 Q. What did you have to do in that regard?

A. The initiative to get the computer came from me and my organization. The plan for acquiring it, the manner of paying for it, the arrangements for

housing it, these were all things that were done in my operation.

49 Q. Under your direction?

A. Yes.

50 Q. I show you what has been marked previously as Sanders' Deposition Exhibit 64 and ask if you recognize that document or if you have ever seen a copy of it or the original from which it was made?

MR. ANDERSON: Mr. Welsh, you are referring to the first page of that two-page exhibit, is that right?

MR. WELSH: Yes. Well, I am referring to both pages, actually.

MR. ANDERSON: Well, let's take them one at a time.

MR. WELSH: Yes, take them one at a time.

THE WITNESS: To the best of my knowledge, I haven't seen this before.

(Indicating)

MR. ANDERSON: And you are

referring to the first page of that two-page exhibit, Exhibit 64?

THE WITNESS: Right.

51 Q. Now, would you look at the second page, realizing that it is very difficult to read because of the reproduction, do you recall a purchase order to Bolt, Beranek & Newman such as this purports to be on or about the date which appears to be 1967?

A. This date corresponds roughly to my memory and I think confirms what I said just a moment ago. It would seem to me that this might be a description of the machine that we bought and installed in Bedford.

52 Q. The one that you referred to, the PDP-1?

A. Yes.

53 Q. And the date that appears there under a section vendor's shipping agreement is 11-13-67, is it not?

A. Yes. I will vouch for the 11 and the '67, I will take your word on the 13.

54 Q. That at least is the late 1967 or early '68 which I believe you said was the time when the PDP-1 was acquired at Bedford?

A. Yes.

55 Q. When the PDP-1 was received at Bedford in late

1967 or early 1968, was it accompanied by any software?

A. Yes.

56 Q. What software accompanied it?

A. There was a collection of punched paper tapes and documents that described the programs that were on those punched paper tapes that were delivered along with the physical equipment.

57 Q. Did any of that software include a program called Space War?

A. Yes.

58 Q. What was the Space War program?

A. Can you ask it a little more specific so I know what you want me to describe?

59 Q. Well, what was the Space War program used for?

MR. ANDERSON: If it was used.  
There is no foundation for that question.

MR. WELSH: If it was used.

THE WITNESS: Well, it wasn't used for anything.

60 Q. Well, was it a demonstration program or a program for playing a game or something like that?

A. It was a program for playing a game.



61 Q. What form did the program take?

A. It existed as a punched paper tape that was read into the PDP-1.

62 Q. Did the PDP-1 have a cathode ray tube display associated with it?

A. Yes.

63 Q. Did that display have a model number or something like that?

A. It did, but I don't remember it.

64 Q. Is Type 30 familiar to you?

MR. ANDERSON: I object to the question as leading. You may answer the question in spite of my objection.

THE WITNESS: I don't remember the number.

65 Q. Did you ever observe the Space War game being played?

A. Yes.

66 Q. When did you first observe that?

A. Other than saying that it was after the machine was delivered and operating, I can't fix a date.

67 Q. Do you recall whether it was soon after or some extended period after?

A. No.

Q. Had you any familiarity with Space War prior to the time the PDP-1 was delivered to Bedford?

A. No, I don't think so.

Q. Had you heard of the game being played either at MIT or at Bolt, Beranek & Newman?

A. Yes. I remember MR. ANDERSON: I object to the question as leading.

THE WITNESS: I don't have any recollection of hearing anything like that.

Q. Prior to the time that the PDP-1 was delivered to Bedford, did you have any familiarity with any other games played using a cathode-ray tube with a computer?

A. Yes.

Q. What other games were you familiar with?

A. Tic-tac-toe.

Q. Any others?

A. No.

Q. And what was your familiarity with tic-tac-toe?

A. I attended an open house demonstration of the Whirlwind computer at MIT sometime in the middle of the 1950's and part of that demonstration was

tic-tac-toe which was a game, and other clever things were displayed on the cathode ray tube.

74 Q. At this same open house?

A. Yes.

75 Q. What other things were displayed on the cathode ray tube?

A. A few that I remember were the solution of a polynomial equation and the solution of the bouncing ball problem.

76 Q. What appeared on the screen of the cathode ray tube when you observed the solution of the bouncing ball equation?

A. The screen showed a horizontal surface with a hole in it. The ball was ejected horizontally parallel to the horizontal surface and bounced several times on the horizontal surface. The idea of the problem was that the ball should go through the hole in the floor.

77 Q. Was some adjustment possible to permit an operator to change the position or some other parameter of where the ball would bounce in order to determine that the ball would go through the hole?

A. As I recall, the operator typed a number which was

the horizontal velocity with which the ball was ejected.

78 Q. Could the operator select different velocities by typing different numbers?

A. To the best of my recollection.

79 Q. Did you actually observe the ball bouncing on the horizontal surface?

A. I did not observe an actual ball bouncing on an actual horizontal surface. I saw a depiction of this on the cathode ray tube.

80 Q. Did you see an image of a ball or what was described as a ball appearing to bounce on what was described as a horizontal surface, another image?

A. I think I can say yes.

81 Q. Did there appear to be any relation between the angle of reflection or bouncing of the ball away from the surface and the angle of incidence; that is, the angle at which the ball approached the surface?

MR. ANDERSON: I object to the question as leading and lacking a foundation.

THE WITNESS: Should I answer?

MR. ANDERSON: Yes, you may

answer.

THE WITNESS: Will you ask the question again?

MR. WELSH: Could you repeat the question, please?

(Whereupon, the previous question was read back by the reporter.)

THE WITNESS: No.

Q. Were you told what equation for a bouncing ball was used?

MR. ANDERSON: I object on the ground of leading and hearsay. You may answer.

THE WITNESS: I don't recall.

Q. Would you describe the circumstances under which you first observed the game of Space War being played on the RDP-1 computer at Bedford?

A. I think somebody came running in my office and said, hey, you ought to see what we have got.

And I accompanied them into the computer room and was shown the game of Space War.

Q. Were there a number of people around?

A. I don't remember.

85 Q. Was that at a time when they were determining what software had come with the computer right after it became operational?

MR. ANDERSON: I object, you are leading the witness; and, worse than that, you are testifying.

THE WITNESS: My recollections aren't that distinct.

86 Q. What do you recall observing about the game Space War at the time that you first saw it?

A. My, what a clever way to waste computer time.

87 Q. What occurred during the game, as you observed it at that time?

A. Will you rephrase your question more precisely so I know what you really want?

88 Q. Could you describe what you saw on the cathode ray tube when you first observed the game of Space War as well as what the players of the game were doing?

A. As I recall, the game was played by two players, each player had control of two switches on the front panel controls on the PDP-1. The display consisted of two moving spots under the control,

one each, of the players. The players caused the spots to maneuver and try to maneuver and align their spot so that it was aimed at the spot of the other player. If and when it was so aligned, they would throw the other switch which caused a rocket blast; and, if their aim was proper, the opponent's spot was destroyed and the one who had fired the blast won.

89 Q. Did a rocket actually appear to leave the spot of the player who caused the rocket blast and approach the spot of the other player?

A. The spots moved over the face of the screen with varying speeds. I think one of the controls enabled the player to generate a force normal to the direction of motion which caused the spot to fly a curved path so that it would change its direction and its orientation.

90 Q. Did the spots which were movable by the players resemble space ships or were they called space ships?

A. I don't recall.

91 Q. What appeared to the viewer when a space ship or when a spot of a player was destroyed?

A. I don't remember.

92

Q. Was there the appearance of an explosion?

MR. ANDERSON: I object, the witness has said that he doesn't recall. You may answer if you can.

THE WITNESS: I don't really remember.

93

Q. Do you remember any other images on the screen besides the spots which were movable by the players? For example, background stars or a sun or some other image?

MR. ANDERSON: I object, you are leading the witness.

THE WITNESS: I have a vague recollection of something that may have been a sun and it provided a central gravitational field and part of what the players were up against were that they had to keep their spot from falling into the sun.

94

Q. What happened if a player's spot did fall into the sun?

MR. ANDERSON: If you recall.

THE WITNESS: I don't know,



it just fell in.

95 Q. Did it disappear?

A. I don't remember.

96 Q. Do you remember anything else about the game of Space War as it appeared on the cathode ray tube screen when you first observed it?

A. No.

97 Q. Did you ever play the game of Space War yourself?

A. I may have. If I did, it was not more than once.

98 Q. After that first time, did you ever observe Space War being played again on the PDP-1 at the Bedford facility?

A. No, I don't think so.

99 Q. Did you have occasion to visit the PDP-1 after that time?

A. Oh, yes.

100 Q. Was that during normal working hours that you visited it?

A. Yes.

101 Q. Were you aware of whether Space War was being played on the PDP-1 at Bedford at times other than normal working hours?

A. No.

102 Q. Did the PDP-1 have different locations at the  
Bedford facility?

A. I think when it first moved in, it was located on  
the ground floor. Shortly thereafter, it moved to  
an area on the second floor and those were the two  
locations that it had while it was in that building.

103 Q. When you say shortly thereafter, approximately how  
long did it stay on the first floor?

A. Two or three months. I probably should add, to the  
best of my recollection.

104 Q. Was the PDP-1 eventually moved away from the  
Bedford facility?

A. Yes.

105 Q. Where was it moved to?

A. To this facility.

106 Q. South Nashua?

A. Yes.

107 Q. North wing?

A. I believe so, yes.

108 Q. When did that occur?

A. Sometime in 1970 after the personnel had moved up  
here.

109 Q. Did they close the Bedford facility?

A. Not at that time.

110 Q. Was that the time when you moved up here to South  
Nashua?

A. I am sorry, I am not sure what you are connecting  
that to.

111 Q. Well, you said that the PDP-1 was moved to South  
Nashua in 1970 after the personnel moved to  
South Nashua.

A. After I and my department had moved.

112 Q. Was the PDP-1 put into use at the South Nashua  
facility after it was moved here?

A. I think it was.

113 Q. Are you aware as to whether Space War was played  
on that PDP-1 after it was moved to this South Nashua  
facility?

A. No, I am not.

114 Q. Are you aware as to whether any version of Space  
War has been played using any other computer at  
Sanders Associates?

A. No, I am not.

115 Q. Have you had occasion to review your knowledge of  
Space War recently?

MR. ANDERSON: I object to the

question as vague and ambiguous. You may answer, if you can.

THE WITNESS: I can't imagine what I would do to review my knowledge of Space War.

116 Q. Has anyone at Sanders asked you about Space War within the past year?

A. The subject has come up in preparation for this session today.

117 Q. With whom did it come up?

A. Ted, your last name is what, please?

MR. ANDERSON: Anderson.

THE WITNESS: Ted Anderson.

118 Q. When did it come up?

A. This morning.

119 Q. Had you met Mr. Anderson before this morning?

A. Yes.

120 Q. Had it come up in any previous meeting with Mr. Anderson?

A. It came up in our previous meeting.

121 Q. Did you have only one previous meeting?

A. To the best of my recollection, yes.

122 Q. When did that occur?

A. Gee, I would place it within the last six to nine

months, but I don't think I can place it any more accurately than that.

123 Q. Did you meet with Mr. Anderson here?

A. Yes.

124 Q. Was anyone else present at that earlier meeting?

A. I seem to remember other people present, but I couldn't tell you how many or who they were.

125 Q. Do you remember if any of them were attorneys from the Patent Department of Sanders?

A. No, I don't.

126 Q. Were you asked what knowledge you had of Space War at that earlier meeting?

A. Yes.

127 Q. What did you state was your knowledge of Space War?

A. That I met Space War on the PDP-1 when it was delivered to Bedford and that I had seen the game played.

128 Q. Anything else?

A. I think that was the substance.

129 Q. Were you asked if you had any documents or things relating to Space War in your files?

A. I don't remember.

130 Q. Were you asked to make a search for such documents?

A. I don't have any such documents nor have I ever had and I honestly don't remember whether I was asked to search for any.

131 Q. Have you discussed Space War with anyone else other than Mr. Anderson and perhaps some other people who were present during the meetings with them?

A. I don't think so.

132 Q. Are you acquainted with a Mr. Frisbie?

A. Yes.

133 Q. How are you acquainted with him?

A. At the present time, I report to him; he is my boss.

134 Q. Have you discussed Space War with him within the last six to nine months?

A. No.

135 Q. Have you ever seen any tapes of programs for playing Space War at Sanders?

A. At the time I saw Space War played on the FDP-1, it is highly probable that the program tape was loaded while I was there; and, if so, I saw the program tape which has or had absolutely nothing distinguishing about it.

136 Q. You did not examine the tape closely?

A. No.

137 Q. Have you ever examined any Space War tape closely?

A. No, nor any other tape.

138 Q. I hand you what has been marked Sanders' Exhibit 5 and ask you if you recognize that tape?

MR. ANDERSON: I object to the question as ambiguous; what do you mean by recognize, as a piece of tape?

MR. WELSH: As something that you have seen before.

THE WITNESS: I recognize this as fan fold tape. This is a kind of tape which is neatly treated at each end, but I recognized the Digital Equipment Company markings and it looks like an eight-level tape; but, other than that, I know nothing distinguishing about this, nor am I in the habit of looking closely at paper tapes to distinguish anything at all about them.

139 Q. Were you within the last six to nine months asked to have anyone working for you make a search for documents or things relating to Space War?

A. No.

140 Q. Are you acquainted with Mr. Ralph Baer?

A. I am.

141 Q. How are you acquainted with Mr. Baer?

A. Through our employment at Sanders.

142 Q. Have you had any direct dealings with Mr. Baer in  
such employment

A. Yes.

143 Q. What are those?

MR. ANDERSON: At the present  
time what are those?

MR. WELSH: What direct  
dealings has he had with Mr. Baer during their  
employment.

THE WITNESS: My dealings with  
Ralph Baer have not been extensive, but if you want  
me to start reciting them, I would have to recite  
an awful lot that I am sure you have no interest  
in or awareness of.

144 Q. Is it possible to state generally what type of  
dealings you have had with Mr. Baer during your  
employment at Sanders?

A. In a general way, yes. I am an analytical type,  
Mr. Baer is a hardware type. I have had frequent  
encounters with him trying to convince him that he



would be much better off if he would make use of things that I know rather than diddling in a way that he diddles.

45 Q. Did any of those things involve TV games?

A. No.

46 Q. Did the subject of TV games ever come up in your dealings with Mr. Baer?

A. No.

47 Q. Did the subject of Space War ever come up in your dealings with Mr. Baer?

A. No.

48 Q. Are you acquainted with Mr. William Rusch at Sanders?

A. No.

49 Q. Are you acquainted with Mr. William Harrison at Sanders?

A. Who?

50 Q. William Harrison.

A. No.

51 Q. Subsequent to your observation of Space War being  
C played on the PDP-1 at Bedford, have you ever  
observed any other games played on a cathode ray  
A tube with a computer?

A. Will you ask that again?

MR. WELSH: Will you repeat  
the question?

(Whereupon, the previous  
question was read back  
by the reporter.)

THE WITNESS: No, not directly.

152 Q. Indirectly?

A. On a television program.

153 Q. On a commercial broadcast?

A. Yes.

154 Q. Other than that, have you observed any games being  
155 played on a cathode-ray tube?

A. No.

156 Q. Have you attended since the time that the PDP-1  
was delivered to Bedford, have you attended any  
computer conferences where there were demonstrations  
of computer displays?

A. Yes.

Q. Have you observed any demonstrations at such  
conferences?

A. I seem to remember a big computer show at the

Hynes Auditorium maybe six or so years ago and somebody had a billiards game.

Q. Where is the Hynes Auditorium?

A. In Boston.

Q. Was that a computer conference?

A. I believe so.

Q. Would you describe what you saw on the display with respect to the billiards game?

A. You know you are asking me to describe - you are asking me questions and I am answering honestly, but they are so peripheral, the things that I noticed at the time, that I have to make up what I remember that I saw.

Q. Well, we would certainly like your best recollection of what you saw. The same as when we asked for your recollection of what Space War looked like to you when you first saw that.

MR. ANDERSON: Mr. Mairson, don't make up anything; only testify to what you can recall.

A. THE WITNESS: As I remember it, I was there with my two sons and some friends of theirs and I was herding them around. They were

then maybe nine and twelve years old and we scooted by some place and there was a screen and there was something like a billiards game and I didn't pay any attention to it because I really wasn't interested in it in the first place and I had to round them up in the second place and there was some place else I wanted to be in the third place.

Q. Do you recall whether there were balls moving about? Do you have that much of a recollection?

A. Yes.

Q. Was there an outline of a billiards table edge or rectangular display on the screen?

A. Probably.

Q. You don't recall specifically?

A. If you even begin suggesting a word like "specifically," I have to say not at all.

Q. Do you recall whether there was an image resembling a cue?

A. No.

Q. You stated that the boys were nine and twelve?

A. Yes.

MR. ANDERSON: I object, I think he said approximately nine and twelve.

Q. Well, having recalled that, does that help you fix perhaps the year a little more specifically that you attended that?

A. No, I worked it back in the other direction.

Q. What computer conference was that?

A. It was the big computer conference that took place in Boston about that time.

Q. Do you remember whether it was the fall or the winter?

A. No.

Q. Subsequent to the time that you first observed Space War on the PDP-1 at Bedford, did you observe any other games such as the billiards game that you recalled at the Hynes Auditorium or other demonstrations where images moved about on the screen of the cathode ray tube associated with a computer?

A. Yes.

Q. Would you describe those, please?

A. I was particularly interested in and remember seeing many different situations of text manipulating schemes on cathode ray tubes.

Q. Anything else?

A. Various techniques for graphical output onto cathode ray screens.

Q. And what graphical outputs do you recall?

A. The primary things I recall are associated with various advanced equipments that were developed within this company for taking voluminous data of one kind or another and presenting it in an orderly fashion on the screen of a cathode ray tube.

Q. And over what period of time did this take place?

A. I am sure my interest goes back at least to the early 1960s.

Q. Do you recall any demonstrations where there were moving images such as the bouncing ball would you describe or the billiards game?

A. No.

Q. Do you recall any other demonstrations of that type of display?

MR. ANDERSON: On a CRT with a computer?

MR. WELSH: Yes.

THE WITNESS: Nothing stands out in my recollection.

176 Q. On which floor of the Bedford facility was the  
PDP-1 located when you first saw Space War?

A. Very probably it was on the second floor.

177 Q. You don't have any specific recollection now?

A. No.

MR. WELSH: I have no further  
questions, Mr. Anderson.

MR. ANDERSON: We have no <sup>22th</sup>  
cross-examination.

MR. WELSH: Under the Federal  
Rules of Civil Procedure, by agreement of counsel,  
you may read your deposition and sign it before  
any Notary Public. We are agreeable to that,  
are we not, Mr. Anderson?

MR. ANDERSON: Yes, that is  
acceptable, Mr. Mairson; if you would be good  
enough to read this transcript when it is prepared  
by this gentleman and make any corrections, if  
necessary, to make it an accurate representation  
of what you have said and then sign it before any  
Notary Public, is that agreeable?

THE WITNESS: Yes.

MR. ANDERSON: Very good.

MR. WELSH: Thank you.

Theodore Mairson

Deponent

THE STATE OF NEW HAMPSHIRE)

COUNTY OF Hillsborough) SS.

Subscribed and sworn to before me this 28th

day of May 19 76.

Marilyn E. Trapalis  
Justice of the Peace and/or  
Notary Public

Marilyn E. Trapalis  
Notary Public

My Commission Expires March 19, 1980

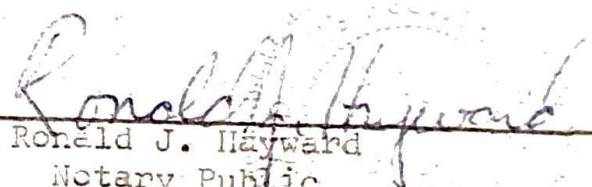


THE STATE OF NEW HAMPSHIRE)  
COUNTY OF ROCKINGHAM ) SS.  
)

I, Ronald J. Hayward, a Notary Public within and for the State of New Hampshire, duly commissioned, qualified and authorized to administer oaths and to take and certify depositions, do hereby certify heretofore, to wit, on the 26th day of April, 1976, personally appeared before me at the Sanders Associates, Inc., Headquarters, Spit Brook Road, Nashua, New Hampshire, Theodore Mairson, a witness called by and on behalf of the defendant in the above-entitled action now pending in the United States District Court for the Southern District of New York and the United States District Court for the Northern District of Illinois, Eastern Division; that the said witness was duly sworn, to testify to the truth, the whole truth and nothing but the truth; that thereupon and while said witness was under oath, the said deposition was taken down by me in machine shorthand at the time and place herein stated and was thereafter reduced to typewriting.

I further certify that I am not interested in the outcome of said action.

IN WITNESS WHEREOF, I have  
hereupon subscribed my hand and affixed my seal of office  
this 26th day of April, 1976.

  
\_\_\_\_\_  
Ronald J. Hayward  
Notary Public

My commission expires October 28, 1980.